

REMARKS

I. Initial Remarks

Applicants thank the Examiner for withdrawing the previously raised Section 112 rejections of claims 1-20 and 25-32. Claims 1-20 and 25-32 remain pending, with claims 1, 6, 11 and 16 written in independent form. No claims are added, amended or canceled in this paper. For at least the following reasons, all claims are in condition for allowance.

In the Office Action, claims 1-20 and 25-32 were rejected under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Pat. Pub. No. 2002/0184390 to Hasan Alkhatib (“Alkhatib”). Alkhatib is cited for the first time; thus the Office Action presents new grounds of rejection. Applicants respectfully traverse the rejections.

In view of the following arguments, all claims are believed to be in condition for allowance over the references of record. Therefore, this response is believed to be a complete response to the Office Action.¹ Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully requests that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

II. Claim Rejections – 35 U.S.C. §102

MPEP § 2131 states that to anticipate a claim, the reference must teach every element of the claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “‘The identical invention must be shown in as complete detail as is contained in the ...claim.’ See *Richardson v. Suzuki Motor Co.*, 868 F. 2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).” As detailed in the subsections below, each and every element as set forth in the claims is not found in Alkhatib.

¹ As Applicants’ remarks with respect to the Examiner’s rejections are sufficient to overcome these rejections, Applicants’ silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

Therefore, for at least the following reasons, the Section 102(e) rejection of claims 1-20 and 25-32 should be withdrawn and the claims allowed.

A. Independent Claim 1

Independent claim 1 was rejected under Section 102(e) as allegedly being anticipated by Alkhatib. However, Alkhatib fails to anticipate at least “a key exchanger configured to repeatedly derive a cipher key such that the resulting cipher key changes over time” and to “decrypt, according to a cipher algorithm keyed by the cipher key, the extracted packet header data to determine a restored address” as recited in the context of claim 1.

1. *“a key exchanger configured to repeatedly derive a cipher key such that the resulting cipher key changes over time”*

Independent claim 1 recites in part “a key exchanger configured to repeatedly derive a cipher key such that the resulting cipher key changes over time.” In the Office Action, paragraph 67 of Alkhatib was cited as allegedly disclosing these recitations. (Office Action, page 3.) While Alkhatib mentions “unencrypting,” Alkhatib fails to anticipate “a key exchanger” at all, let alone “a key exchanger configured to repeatedly derive a cipher key such that the resulting cipher key changes over time” as recited in the context of claim 1.

Alkhatib discloses a “data unit” addressed to a global address of a “domain name router,” where the “data unit” further includes a domain name indicative of a local address within the stub network to be the destination for the data unit. (e.g., Alkhatib, Abstract.) Alkhatib further discloses that “the Domain Name Router receives the data, extracts the destination’s domain name from the data, translates that domain name to a local address in its stub network and sends the data to the destination.” (Alkhatib, paragraphs 12 and 14.) In Alkhatib, the “extraction or identification can be by unencoding, decoding, decompressing, unencrypting, etc.” (Alkhatib, paragraph 36.)

Cited paragraph 67 is in reference to Figure 10 of Alkhatib, which discloses the steps “receive packet,” “identify domain name,” “translate,” and “send data.” As cited by the Examiner:

FIG. 10 describes the steps performed by DNR 138 when it receives the IP packet from host 150. In step 502, DNR 138 receives the IP packet. In step 504, DNR 138 identifies the destination's domain name from the packet. Identifying the domain name could include looking

for the domain name in the header, data portion or other location in an IP packet, TCP segment, application data, etc. Identifying the domain name may include reading an ASCII string. Alternatively, if the domain names are compressed, encrypted, encoded, etc., then DNR 148 would need to decode, decompress, unencrypt, etc. In step 506, DNR 138 translates the destination domain name to a local address and in step 508 the packet is routed to the destination with the local address. FIG. 11 describes one exemplar embodiment for performing the step of translating the destination domain name to a local address (step 506 of FIG. 10). Other suitable methods of translating a domain name can also be used. Translating a domain name can include less than all of the steps of FIG. 11. In step 512, DNR 138 looks up the domain name in a DNR table stored in its memory or other storage device. The DNR table includes domain names and corresponding local addresses. In one embodiment, the DNR table could also include Ethernet addresses....

(Alkhatib, paragraph 67.) Paragraph 67 continues on to discuss “multiple DNRs, forming a tree.”

(Id.)

Alkhatib states that “if the domain names are compressed, encrypted, encoded, etc., then DNR 148 would need to decode, decompress, unencrypt, etc.” (Alkhatib, paragraph 67.) However, Alkhatib fails to disclose or suggest any details of any decode, decompress or unencrypt operations. Specifically, Alkhatib fails to disclose or suggest “a key exchanger configured to repeatedly derive a cipher key,” let alone “a key exchanger configured to repeatedly derive a cipher key such that the resulting cipher key changes over time” as recited in the context of claim 1.

For at least these reasons, independent claim 1 and all claims that depend therefrom are patentable over Alkhatib.

2. “decrypt, according to a cipher algorithm keyed by the cipher key . . .”

Independent claim 1 further recites in part to “decrypt, according to a cipher algorithm keyed by the cipher key, the extracted packet header data to determine a restored address” within the context of the claim. In the Office Action, the Examiner cited paragraphs 12, 14, 36, and 67 of Alkhatib as allegedly disclosing the recitations. (Office Action, pages 3-4.)

As mentioned by the Examiner, “[the] Domain Name Router receives the data, extracts the

Destination's domain name from the data, translates that domain name to a local address in its stub network and sends the data to the destination.” (Alkhatib, paragraph 12.) Moreover, Alkhatib further discloses “packaging at least a subset of data to be communicated to an entity on a network into a data unit,” where:

The data unit can be formed by receiving a first set of data and a domain name. A field (or other subset) is created, which includes a first set of information representing the domain name. The field is appended to the first set of data to create the data unit. The data unit is sent to the Domain Name Router. The data unit could be an IP packet, a TCP segment, or any other data unit suitable for use with the present invention as long as the domain name can be reliably extracted from the data. In one embodiment, the information used to represent the domain name could include an encrypted version of the domain name, an encoded version of the domain name, a compressed version of the domain name, etc.

(Alkhatib, paragraphs 13-14; Emphasis added.) Also as mentioned by the Examiner, “extraction or identification can be by unencoding, decoding, decompressing, unencrypting, etc.,” and “if the domain names are compressed, encrypted, encoded, etc., then DNR 148 would need to decode, decompress, unencrypt, etc.” (Alkhatib, paragraphs 36 and 67.)

While Alkhatib mentions generally that “DNR 148 would need to decode, decompress, unencrypt, etc.,” Alkhatib fails disclose any details at all of these decode, decompress, or unencrypt operations. Specifically, Alkhatib fails to anticipate “a cipher algorithm keyed by the cipher key” at all, let alone to “decrypt, according to a cipher algorithm keyed by the cipher key, the extracted packet header data to determine a restored address” as recited within the context of the claim 1.

Moreover, Alkhatib further fails to anticipate to “decrypt, according to a cipher algorithm keyed by the cipher key, the extracted packet header data to determine a restored address” within the further context of “to repeatedly derive a cipher key such that the resulting cipher key changes over time” as recited in claim 1. Rather, Alkhatib fails to teach or suggest any such “cipher key” and “cipher algorithm keyed by the cipher key,” let alone to “decrypt, according to a cipher algorithm keyed by the cipher key, the extracted packet header data to determine a restored address” by way of such a derived “cipher key.”

For at least these reasons, independent claim 1 and all claims that depend therefrom are patentable over Alkhatib.

B. Independent Claims 6, 11 And 16

Each of independent claims 1, 6, 11, and 16 was rejected under Section 102(e) as allegedly being anticipated by Alkhatib. While claims 1, 6, 11, and 16 are each of different scope, for at least reasons similar to those discussed above with regard to independent claim 1, independent claims 6, 11, and 16 are patentable over Alkhatib.

For example, as discussed above with regard to independent claim 1, Alkhatib does not teach or suggest “to repeatedly derive a cipher key such that the resulting cipher key changes over time” and to “decrypt, according to a cipher algorithm keyed by the cipher key, the extracted packet header data to determine a restored address” as recited in the context of claim 1. Independent claims 6, 11, and 16 each includes like recitations, although claim 6 recites “decrypting,” claim 11 recites “means for repeatedly deriving” and “means for decrypting,” and claim 16 recites to “repeatedly derive.”

Accordingly, for at least similar reasons to those discussed above with regard to independent claim 1, independent claims 6, 11, and 16 and all claims that depend therefrom are patentable over Alkhatib.

C. Dependent Claims 2-5, 7-10, 12-15 And 25-32

Claims 2-5, 7-10, 12-15, and 25-32 are in condition for allowance at least because they depend from one of independent claims 1, 6, 11, or 16. Further, the dependent claims also recite independently patentable subject matter, representative examples of which are discussed below.

1. Claim 25

Claim 25 depends from independent claim 1 and recites in part “the host portion of the address having been translated without the network portion also being translated, and wherein said translator is configured to restore the host portion of the address without also restoring the network portion of the address.” In the Office Action, the Examiner cited paragraph 67 of Alkhatib as allegedly disclosing the recitations, without explanation. (Office Action, page 5.)

Paragraph 67 of Alkhatib discloses in part that:

FIG. 10 describes the steps performed by DNR 138 when it receives the IP packet from host 150. In step 502, DNR 138 receives the IP packet. In step 504, DNR 138 identifies the destination's domain name from the packet. Identifying the domain name could include looking for the domain name in the header, data portion or other location in an IP packet, TCP segment, application data, etc. Identifying the domain name may include reading an ASCII string. Alternatively, if the domain names are compressed, encrypted, encoded, etc., then DNR 148 would need to decode, decompress, unencrypt, etc. In step 506, DNR 138 translates the destination domain name to a local address and in step 508 the packet is routed to the destination with the local address.

(Alkhatib, paragraph 67.) Alkhatib further discloses that “the global address for DNR 138 in the IP packet is replaced with the local address in the table” and “the checksum for the IP header is adjusted if necessary.” (Alkhatib, paragraph 68.) Moreover, as cited earlier in the Office Action, paragraph 15 of Alkhatib states that:

In one embodiment, the data unit sent to the Domain Name Router includes a global IP address for the Domain Name Router. After translating the domain name to a local address, the Domain Name Router will replace the global address for the Domain Name Router with the local address of the destination. The step of replacing the global address with the local address can include adjusting any appropriate checksums or any other necessary fields in the data unit.

(Alkhatib, paragraph 15; Emphasis added.) Thus, Alkhatib specifically discloses to overwrite the entire destination address of the data unit.

Because Alkhatib discloses to overwrite the entire destination address of the data unit with “the local address of the destination,” Alkhatib accordingly replaces both the network portion of the destination address and also the host portion of the destination address. Thus, as Alkhatib replaces the entire destination address, Alkhatib fails to anticipate “wherein said translator is configured to restore the host portion of the address without also restoring the network portion of the address.” (Emphasis added.) For at least these reasons, claim 25 is separately patentable over Alkhatib.

2. Claims 27, 29 And 31

Each of claims 27, 29, and 31 was rejected under Section 102(e) as allegedly being anticipated by Alkhatib. (Office Action, page 6.) As discussed above with regard to claim 25, Alkhatib does not teach or suggest “to restore the host portion of the address without also restoring the network portion of the address.” Claims 27, 29, and 31 depend from different base claims, but each includes like recitation. Thus, while claims 25, 27, 29, and 31 are each of different scope, for at least reasons similar to those discussed above with regard to claim 25, claims 27, 29, and 31 are separately patentable over Alkhatib.

III. CONCLUSION

In view of the above remarks, the pending application is in condition for allowance. Reconsideration and allowance are respectfully requested.

It is believed that any fees associated with the filing of this paper are identified in an accompanying transmittal. However, if any additional fees are required, they may be charged to Deposit Account No. 18-0013, under Order No. 65632-0534. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged against the aforementioned account.

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